

## **REMARKS/ARGUMENTS**

Claims 1-19 are pending in this application. Claims 1-19 stand rejected under 35 USC § 103(a). Claims 1, 7, 10, 14, 15 and 17 have been amended. Claim 20 has been added. Reconsideration is respectfully requested in view of the above amendments to the claims and the following remarks

### **Claim Rejections – 35 USC § 103**

Claims 1-19 stand rejected under 35 USC § 103(a), as being unpatentable over U.S. Patent No. 6,865,218 to Sourour (hereinafter, “Sourour”) in view of the instant application’s disclosed prior art (hereinafter, “APA”). Applicants have amended the above claims to overcome this rejection.

The factual inquiries that are relevant in the determination of obviousness are determining the scope and contents of the prior art, ascertaining the differences between the prior art and the claims in issue, resolving the level of ordinary skill in the art, and evaluating evidence of secondary consideration. KSR Int’l Co. v. Teleflex Inc., 550 U.S. \_\_\_, 2007 U.S. LEXIS 4745, at \*\*4-5 (2007) (citing Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966)). To establish a *prima facie* case of obviousness, the prior art references “must teach or suggest all the claim limitations.” M.P.E.P. § 2142. Moreover, the analysis in support of an obviousness rejection “should be made explicit.” KSR, 2007 U.S. LEXIS 4745, at \*\*37. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” Id. (citing In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Claim 1 has been amended to recite “receiving signals in an environment encompassing an antenna diversity system, the antenna diversity system comprising a plurality of antennas each transmitting a modulated signal.” Support for this amendment may be found in Applicants’ specification, for example, page 3, paragraph [0017]; page 4, paragraph [0018] and page 5, paragraph [0030]. Sourour, alone or in combination with APA, does not teach or suggest this subject matter.

Instead Sourour states:

A method and system reduce multipath signal interference in a CDMA receiver. The CDMA receiver including parallel first and second RAKE

receivers receives a multipath signal. The first RAKE receiver includes a number of individual RAKE fingers, each operating with a defined finger delay matched to a propagation path delay. The output signal from each RAKE finger includes multipath interference. The second RAKE receiver includes a group of RAKE fingers corresponding to each RAKE finger in the first RAKE receiver. Each group of RAKE fingers is configured to produce an estimate of the multipath interference in the output signal generated by the corresponding RAKE finger in the first RAKE receiver. The estimated multipath interference signals are scaled, and then subtracted from the RAKE finger outputs from the first RAKE receiver to reduce multipath interference. Scaling coefficients are adjusted to ensure that such subtraction effectively reduces multipath interference.

Sourour, abstract.

A method to “reduce multipath signal interference” does not teach or suggest that the method occurs in “an environment encompassing an antenna diversity system, the antenna diversity system comprising a plurality of antennas each transmitting a modulated signal.” In order to “reduce multipath signal interference”, Sourour states that “[t]he estimated multipath interference signals are scaled, and then subtracted from the RAKE finger outputs from the first RAKE receiver.” (Sourour, abstract.) However, subtracting estimated quantities of interference in a multipath environment does not teach or suggest that the multipath environment is “an environment encompassing an antenna diversity system, the antenna diversity system comprising a plurality of antennas each transmitting a modulated signal.”

Sourour also states:

In operation the primary RAKE 202 is configured such that each one of the primary RAKE fingers 210 is assigned to one of the propagation paths of interest. Each primary RAKE finger 210 correlates the received CDMA signal at a time offset corresponding to a path delay associated with the assigned propagation path of that primary RAKE finger 210.

Sourour, col. 8, lines 50-55.

It appears that the Office Action is asserting that “propagation paths of interest” teaches “a multipath spacing environment.” (Office Action, page 2.) Regarding the “propagation paths of interest,” Sourour states:

[T]he radio signal transmitted by the antenna 14 associated with the base station 12 travels through a number of different propagation paths depending upon the environmental surroundings relevant to the fixed position of the base station 12 and the variable position of the mobile terminal 100. Obstacles commonly include buildings and geographic features, as well as other types of structures and obstructions. The radio

signals transmitted from the base station antenna 14 may have a direct, line-of-site path to the mobile terminal 100, but will usually also travel to the mobile terminal 100 via alternate propagation paths induced by the radio signal reflecting from various obstructions.

Sourour, col. 7, line 62 – col. 8, line 6.

The “propagation paths” are various paths the signal travels through before reaching the mobile station. The various paths are caused by “buildings and geographic features, as well as other types of structures and obstructions.” (*Id.*) Simply stating “propagation paths of interest” does not teach or suggest “a non-negligible multipath spacing environment.” Sourour does not teach or suggest that the environment consisting of these “propagation paths” is “a non-negligible multipath spacing environment.”

The addition of APA does not overcome the deficiencies of Sourour. In fact, the APA admits that it does not teach or suggest offset-time tracking in “a non-negligible multipath spacing environment” and “an environment encompassing an antenna diversity system, the antenna diversity system comprising a plurality of antennas each transmitting a modulated signal.” For example, the APA states:

A problem occurs when a mobile station’s receiver has to time track on the signals from both base station transmit antennas, and the multipath spacing from one or both of these antennas is non-negligible (e.g., multipath spacing is less than 1.5 chips). There is a resulting need for a receiver that can time track in a non-negligible multi-path environment having antenna diversity.

APA, paragraph [0017].

As such, the APA concedes that it cannot time track signals from “both base station transmit antennas . . . [when] the multipath spacing from one or both of these antennas is non-negligible.”

In view of the foregoing, Applicants respectfully submit that claim 1 is patentably distinct from the cited references. Accordingly, Applicants respectfully request that the rejection of claim 1 be withdrawn because Sourour, alone or in combination with APA, does not teach or suggest all of the subject matter of claim 1.

Claims 2-6 depend either directly or indirectly from claim 1. Accordingly, Applicants respectfully request that the rejection of claims 2-6 be withdrawn.

Claims 7, 10, 14, 15 and 17 have been amended with subject matter similar to the subject matter amended to claim 1. As such, Applicants submit that claims 7, 10, 14, 15 and 17 are

patentably distinct from the cited art for at least the same reasons as those presented above in connection with claim 1. Accordingly, Applicants respectfully request that the rejection of claims 7, 10, 14, 15 and 17 be withdrawn.

Claims 8 and 9 depend directly from claim 7. Claims 11-13 depend directly from claim 10. Claim 16 depends directly from claim 15. Claims 18-19 depend directly from claim 17. Accordingly, Applicants respectfully request that the rejection of claims 8, 9, 11-13, 16 and 18-19 be withdrawn.

**New Claim**

Claim 20 has been added. Applicants submit that claim 20 is fully supported by Applicants' specification. Claim 20 includes subject matter similar to the subject matter described hereinabove in relation to claim 1. As such, Applicants submit that claim 20 is patentable for at least the same reasons as those previously described.

**CONCLUSION**

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any additional fees or credit any overpayments that may be due with this response to Deposit Account No. 170026.

Respectfully submitted,

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